CLASSIFICATION RESTRICTED
SECURITY INFORMATION
CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT
CD NO.

STAT

COUNTRY USSR

SUBJECT Scientific - Electricity, literature

HOW PUBLISHED Monthly periodical

WHERE PUBLISHED Moscow

DATE PUBLISHED Nov 1950

LANGUAGE Russian

DATE OF INFORMATION 1950

DATE DIST. 19 Jan 1953

NO. OF PAGES 3

SUPPLEMENT TO REPORT NO.

THIS IS UNEVALUATED INFORMATION

SOURCE Elektrichestvo, No 11, 1950, p 96.

SOVIET BOOKS ON ELECTRICITY, ELECTRICAL ENGINEERING, AND ELECTRIC POWER ENGINEERING PUBLISHED IN 1950

/Comments on books in the following list are included in the original./

1. "Electrical Engineering Handbook" (Elektrotechnicheskiy Spravochnik), High-Voltage Electric Equipment for Stations, Substations and Transmission Lines, edited by M. V. Khomyakov, 3d edition, supplemented and reedited Gosenergoizdat, 495 pp, 37 rubles.

The handbook is intended chiefly for personnel who operate high-voltage equipment, such as stations, transformer substations, and overhead and cable lines. A number of new tables are given and many others have been corrected and supplemented by new data. Observations made as to the second edition in 1948 at the conferences of VNITOE (All-Union Scientific and Technical Society of Power Engineers) and the Technical Division of the Ministry of Electric Power Stations were studied by the authors in preparing this edition. It is highly probable that some tables in Chapters III, V, and X will need correction after the imminent revision of the Regulations for Technical Operation of Electric Power Stations and Networks. However, this does not make the handbook less valuable for power engineers and technicians in the Soviet Union.

2. "Designing Electrical Machines" (Proyektirovaniye elektricheskikh mashin), N. V. Vinogradov, F. A. Goryainov and P. S. Sergeyev, edited by P. S. Sergeyev, Gosenergoizdat, 591 pp, 21 rubles, 50 kopeks, authorized as a textbook for electromechanical and technical schools.

3. "Electrical Precipitators" (Elektrofil'try), S. P. Zhebrovskiy, Gosenergoizdat, 256 pp, 14 rubles.

In the last few years considerable success has been achieved, especially in the Soviet Union, in purifying gases. The special institute founded for this purpose -- NIIOGAZ /Scientific Research Institute for Purification of Gases?/ -- has accomplished valuable work in a short time. The author, who has

CLASSIFICATION RESTRICTED

STATE	X	NAVY	X	NSRB		DISTRIBUTION					
ARMY	X	AIR	X	FBI							

had close contact with measures taken in electrical gas purification, has aimed to create a textbook for engineers engaged in research on or in operation of special electrical precipitators. The first part of the book deals with the theory of electric discharge in gases under atmospheric pressure, the theory of dc corona, etc. The second part treats practical applications of corona discharge. The construction of electrical precipitators is examined, as well as their physical processes, power supplies, and the problems relating to the separation of suspended particles. The appendix gives formulas for basic calculations of electrical precipitators.

4. "Instructions for Putting Electric Power Lines Into Operation" (Instruktsiya po priyemke v eksploatatsiyu liniy elektroperedachi), (provisional), Ministry of Electric Power Stations, Technical Administration of Construction and Assembly, Gosenergoizdat, 36 pp, gratis.

5. "Electronic and Ionic Converters" (Elektronnyye i ionnyye preobrazovateli), Principles of Industrial Electronics. Part I. Electronic Engineering, I. L. Kaganov, Gosenergoizdat, 664 pp, 22 rubles. Accepted as a textbook for power and electrical engineering (higher educational) institutions and faculties.

6. "Radio Engineering Materials and Parts" (Radiotekhnicheskiye materialy i detali), D. M. Kazarnovskiy, Leningrad Red Banner Military Aeronautical Engineering Academy (LKVVIA), 262 pp, 18 rubles.

The book is based on courses of lectures given by the author at the LKVVIA and the Academy of Communications imeni Budennyy. It consists of 12 chapters and contains descriptions both of the various electrical engineering materials (insulation materials, conductors, semiconductors and magnetic materials) employed in construction of modern electronic equipment, and of the most widely used radio parts (capacitors, resistors, rectifiers, hf magnetic cores, hf cables, etc.). It supplies basic information on the physics of dielectrics, semiconductors, and ferromagnetics as well as some data on the production technology of radio equipment. A short chapter (IX) describes the manufacture of particular units by the modern "printed" method. The appendices contain a number of tables of technical data on different materials which are useful for comparative evaluations. There is a short list of books (26 titles) pertaining to the study of electrical materials.

7. "Planning of Electric Illumination" (Proyektirovaniye elektricheskogo osveshcheniya), G. M. Knorring, Gosenergoizdat, 416 pp, 23 rubles.

The book is intended for electrical engineers engaged in the design and operation of electric lighting equipment. It discusses general problems in planning electrical illumination but does not treat special branches of illuminating engineering, such as calculation of illuminating devices, the theory of sight, color studies, light measurements, etc. On these subjects the author refers readers to the works of L. D. Bel'kind, V. V. Meshkov, P. M. Tikhodeyev, S. O. Mayzel', S. V. Kravkov, A. A. Gershun, N. G. Boldyrev, etc. The text is divided into 15 chapters on the following subjects: lighting equipment and its design; principles of illuminating engineering; sources of light; lighting devices; most advantageous arrangement of lights; quality of lighting; systems and types of illumination; calculation of luminous efficiency for point sources; calculation by the point method using point sources; calculation of searchlight illumination; calculation of illumination from large light sources; power supply for lighting equipment; determination of conductor cross sections; layout of lighting networks; and a short survey of special factors encountered in lighting some objects. There are 189 illustrations and an alphabetical index.

8. "Introduction to the Electronics of Superhigh Frequencies" (Vvedeniye v elektroniku sverkhvysokikh chastot), V. F. Kovalenko, Izd-vo "Sovetskoye radio", 170 pp, 7 rubles, 50 kopeks.

9. "Accident Prevention in Electrical Installations" (Tekhnika bezopasnosti v elektricheskikh ustanovkakh), A. I. Kuznetsov, Gosenergoizdat, 342 pp, 12 rubles, 80 kopeks. Authorized as a textbook for power and electrical engineering institutes and faculties.

10. "New Developments in Radio Reception Techniques" (Novoye v tekhnike radio-priyema), A. A. Kulikovskiy, Gosenergoizdat, 120 pp, 3 rubles, 75 kopeks.

Although the book is intended to assist advanced amateur designers, it should prove of interest to a wide circle of readers, including engineers occupied with problems related to the reception of broadcasting programs. It covers modern techniques used in the design of input circuits, transformers, and oscillators and techniques for limiting noise. A special section deals with FM circuits. The fifth chapter is of special interest, being devoted to new af amplification circuits, problems involved in phonograph record reproduction, and methods for high-fidelity reproduction of concert broadcasts and mechanical records. Figure 81 gives the schematic diagram of a high-powered af amplifier with separate amplification for low and high audio frequencies.

11. "Ultraviolet Radiation and Its Applications" (Ul'trafioletovaya radiatsiya i yeye primeniye), D. N. Lazarev, Gosenergoizdat, 120 pp, 5 rubles, 75 kopeks.

The book contains a popular exposition of the principles underlying the study of radiant energy and considerable reference material, especially on photoluminescence, luminophors, etc. It discusses the principles of "black light" and some of its applications, including luminescent analysis, light-camouflage, theater-lighting techniques, the graphic arts, and motion pictures. Of practical interest is material on applications of ultraviolet radiation in medicine, and in home and public sanitation. The book is well illustrated; the appendices contain reference tables and a list of recommended books.

12. "Electric-Spark Machining of Metals" (Elektroiskrovaya obrabotka metallov), B. R. and N. I. Lazarenko, Gosenergoizdat, 120 pp, 4 rubles, 50 kopeks.

The electric-spark method of machining metals, based on phenomena accompanying the pulsed release of electrical energy, was first applied in the USSR by the authors, who were awarded a Stalin Prize. Compared with the information published in 1944 - 1946, this book gives more detailed information and is devoted largely to the applications of spark machining and the equipment developed for it. Since it is in the nature of a summary, this book will be useful not so much to specialists in this field as to a wide circle of readers, especially manufacturers interested in possible employment of spark machining to replace mechanical cutting in their branches of industry.

13. "Selected Works" (Izbrannyye trudy) of E. Kh. Lents (Lenz), edited and annotated by T. P. Kravets. Articles by K. K. Baumgart, L. S. Berg and T. P. Kravets. Izd-vo Akademii Nauk SSSR, 521 pp, 21 rubles, 50 kopeks.

14. "Testing of Grounding Elements in Electrical Installations" (Ispytaniye zazemlyayushchikh ustroystv elektricheskikh ustanovok), Measuring Methods and Apparatus, A. I. Lur'ye, Gosenergoizdat, 156 pp, 8 rubles, 50 kopeks.

15. "Hf Heating of Dielectrics and Semiconductors" (Vysokochastotnyy nagrev dielektrikov i poluprovodnikov), A. N. Maznin, A. V. Netushil and Ye. P. Parini, edited by A. V. Netushil, Gosenergoizdat, 236 pp, 13 rubles, 75 kopeks.

16. "Course in Electrical Engineering for Military Communications Schools" (Kurs elektrotekhniki dlya voyennykh uchilishch svyazi), Voyennoye izd-vo, 592 pp, 16 rubles, 85 kopeks.

- E N D -